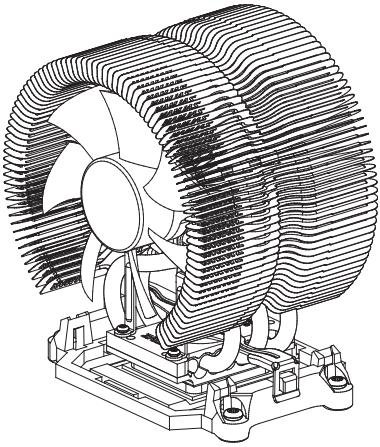
User's Manual

(English Version)

ZALMAN

CNPS9500 AM2



AMD Socket AM2/754/939/940 CPU

Opteron
Athlon 64 X2 Dual-Core
Athlon 64 FX
Athlon 64
Sempron

* Please read before installation.

http://www.zalman.co.kr http://www.zalmanusa.com

1. Features

1) Compatible with AMD Opteron, Athlon 64 X2 Dual-Core, Athlon 64 FX, Athlon 64, and Sempron for Socket AM2/754/939/940.
2) Pure copper heatsink with component layout optimized for maximum cooling efficiency.
3) Innovative, patented, and curved heatpipe design for a heat transfer capacity of up to six heatpipes with the use of just three.
4) Ultra slim fins (0.2mm) for minimized weight and reduced airflow resistance.
5) Adjustable fan speed controller (FAN MATE 2) included.

2. Specifications

1) Cooler

Spec. \ Model	CNPS9500 AM2
Heatsink Material	Pure Copper
Weight (g)	530(1)
Thermal Resistance (℃/W)	0.12 ~ 0.16
Dimensions (mm)	85(L) X 112(W) X 125(H)
Bearing Type	Dual Ball Bearing
Rotation Speed	1,350rpm ± 10% ~ 2,600rpm ± 10%
Noise Level	18.0dB ± 10% ~ 27.5dB ± 10%(2)
Input Voltage	5~12V
Dissipation Area (㎠)	3,698

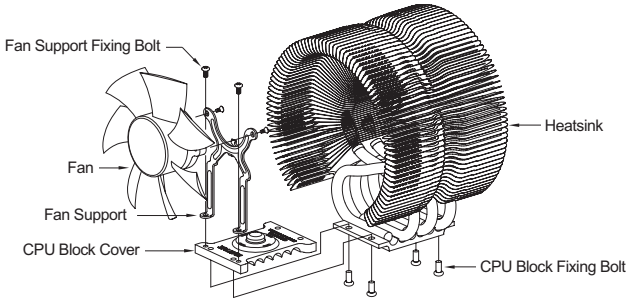
2) FAN MATE 2

- Output Voltage : 5V ~ 11V ± 2%
- Allowable Power : 6W or lower

(Note 1) The maximum weight specified for a cooler is 450g for AMD socket AM2/754/939/940. Special care and attention must be taken when moving a computer equipped with a cooler exceeding the specified weight limit. Zalman Tech Co., Ltd. is not responsible for any damage resulting from moving a computer.

(Note 2) Noise level was measured 1m away from the source.

3. Exploded View



4. Patents

- ❖ Korean Patent Application No. 05-45737
- ❖ Korean Design Application No. 05-15303, 15304, 15306, 15307, 17970, 17971
- ❖ Patent Applications pending in over 20 nations around the world including USA, EU, and Japan

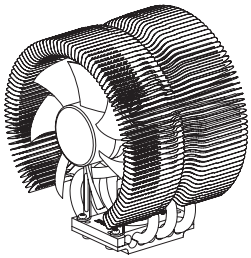
5. Precautions

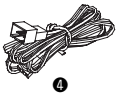
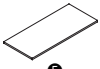
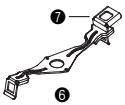
1) If excessive force is exerted on the fan, it may result in malfunction or damage to the product and/or the computer.
2) Avoid inserting any objects into the fan while it is in operation.
3) Keep the product away from the reach of children and pets.
4) Check the components list and condition of the product before installation. If any problem is found, contact the place of purchase to obtain a replacement/refund.
5) CPU and motherboard are subject to damage if the product is incorrectly installed. Familiarize yourself with the "Installation" steps before installing the product.

Disclaimer) Zalman Tech Co., Ltd. is not responsible for any damages due to external causes, including but not limited to, improper use, problems with electrical power, accident, neglect, alteration, repair, improper installation, or improper testing.

6. Components

❶ CNPS9500 AM2
❷ Thermal Grease
❸ FAN MATE 2 (Fan Speed Controller)
❹ Cable for FAN MATE 2
❺ Double-sided Tape (to attach FAN MATE 2)
❻ One(1) Clip
❼ One(1) Lever
❽ User's Manual



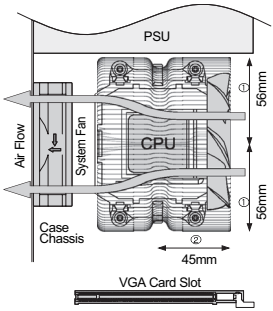
7. Compatible CPUs

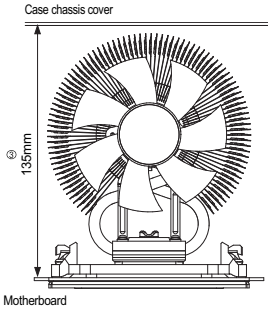
All AMD Socket AM2/754/939/940 CPUs :
- Opteron
- Athlon 64 X2 Dual - Core
- Athlon 64 FX
- Athlon 64
- Sempron

8. Installation Requirements

Cases equipped with an Air Guide must have their Air Guide Ducts removed before installation.
Install only on systems meeting the following conditions :

① There must be no interfering components (e.g. PSU, VGA card) within 56mm distance from the center of the CPU.
② There must be no interfering components (e.g. ODD) within 45mm distance from the center of the CPU.
③ Case chassis cover must be distanced at least 135mm away from the motherboard.

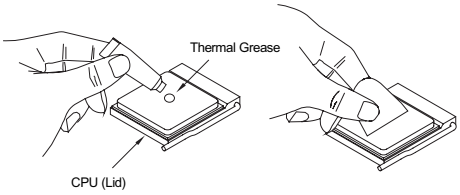




9. Installation

① Thermal Grease Application

Clear off particles and residue from the top of the CPU then apply an even layer of the included thermal grease on top of the CPU that makes contact with the base of the CNPS9500 AM2.

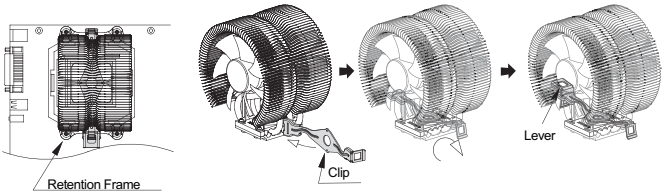


② Clip Installation

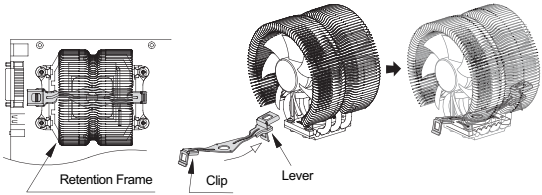
First check the orientation of the Retention Frame of motherboard, then install the clip accordingly by referring to the diagrams below.

※ **Note** : If the Retention Frame is vertically mounted on the motherboard, then the lever can be coupled with clip after the clip is fully inserted into the cooler.

[Vertically-oriented Retention Frame]

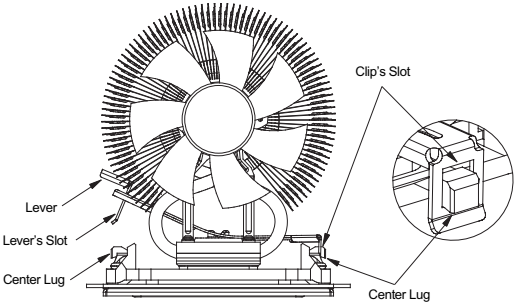


[Horizontally-oriented Retention Frame]



③ Cooler Installation

Place CNPS9500 at the center of the CPU. Hook the clip's slot into the center lug of retention frame, then hook the lever's slot into the other center lug.

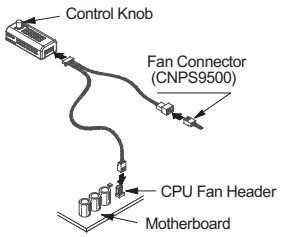


④ Connect Power (Use FAN MATE 2)

❖ Please refer to FAN MATE 2 installation and usage on page 5.

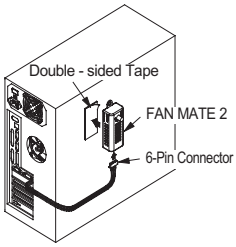
10. FAN MATE 2 Installation and Usage

1) Installing FAN MATE 2 inside the System



Connect the appropriate 3-pin connector on the cable to the CPU Fan Header and to the CNPS9500's Fan Connector.

2) Installing FAN MATE 2 outside the System



Pull the 6-pin Connector out of the system and connect it to FAN MATE 2, which can be attached to the case with the Double-Sided Tape.

◆ Fan speed is controlled by adjusting the control knob. When the control knob on FAN MATE 2 is turned fully counter-clockwise, the fan operates in Silent Mode. Turned fully clockwise, it operates in Normal Mode.

Note) FAN MATE 2 has been specifically designed for the fan of this product. Zalman Tech Co., Ltd. is not responsible for any damage to systems or CPUs caused by its use with other types of fans.

11. Notes on Usage

1) Checking CPU Compatibility

Please refer to "Compatible CPUs" on page 2 to confirm that your CPU is compatible before using the CPU cooler.

2) Cautions During Booting

When booting the computer, it may automatically power down after an alarm sound is set off by a system monitoring program. This indicates that the CPU fan is rotating slowly. If this happens, turn the Control Knob fully clockwise to increase the fan speed. Then set 'CPU Fan Detected' to 'Disabled' in BIOS settings, or set the slowest rotational speed of the CPU fan in the system monitoring program to less than or equal to 1300rpm.

Note) Some motherboards do not boot if the rotational speed of the CPU fan is below a certain rpm. If the BIOS settings are updated, Silent Mode can be used. For more information on updating your BIOS, please refer to the motherboard manufacturer's website. Disabling CPU fan speed detection in BIOS settings does not affect computing performance.

3) OVERCLOCKING

Zalman Tech Co., Ltd. is not responsible for any damage resulting from CPU OVERCLOCKING.

12. Zalman Computer Noise Prevention System

The use of Zalman's Noiseless Power Supply, CPU Cooler, Case Fan, Fanless Northbridge Cooler, and Video Card Cooler will allow you to achieve stable performance and maintain a noiseless environment.

Noiseless Power Supply

Fanless Northbridge Cooler

Heatpipe HDD Cooler

Noiseless Case Fan

Quiet VGA Cooler

Fan Controller

13. TNN (Totally No Noise) Computer Enclosures

TNN 300

TNN 500AF

TNN Computer Enclosures are the world's first environment-friendly noiseless computer enclosures that operate without the use of a fan. TNN Computer Enclosures use the aluminum enclosure itself as a heatsink. They are ideal for environments that require silence, as well as for home theatre systems and multi-media systems.

14. Home Theatre PC Enclosures

HD160

The HD160 is designed for ultra quiet home theatre PC operation, utilizing optimized ventilation and anti-vibration reinforcements, making it ideal for environments that require silence such as living rooms, bedrooms, educational facilities, and offices.

For more information, please visit our website.

Disposal of Old Electrical & Electronic Equipment
(Applicable in the European Union and other European countries with separate collection systems)